

# Contaminated Sediments and Dredging

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## ***Puget Sound Management Plan Goal***

- Reduce and ultimately eliminate adverse effects on biological resources and humans from sediment contamination throughout the Sound by reducing or eliminating discharges of toxic contaminants and by capping, treating or removing contaminated sediments.

## **Strategies for Achieving Goal**

- Classify sediments that cause adverse biological effects and significant human-health risks.
- Implement Soundwide controls on sources of contamination causing sediments to fail the sediment standards.
- Provide rules and sites for disposal of dredged materials.
- Expand the urban bay program to provide for additional source control and consideration of cleanup actions for existing areas of high sediment contamination levels.

## **Background and Trends**

Many toxic chemicals build up in Puget Sound's sediments. Aquatic animals that live in or on the sediments are exposed to these chemicals, as are the fish, birds and mammals that eat them. This exposure harms aquatic life and poses risks to human health. In addition, difficulties in disposing contaminated sediments cause delays and increased costs for development.

Almost all sediments show the chemical fingerprint of past and current discharges of wastewater and stormwater runoff. Concen-

trations of contaminants are highest in urban bays and other shallow areas where discharges occur. Research shows that juvenile salmon from contaminated bays are affected by the pollution. More than 15,000 acres of Puget Sound sediments have been surveyed for contamination, less than one percent of the total area. About 5,700 acres of the area surveyed was contaminated to levels that exceed sediment standards. The contaminated area has been divided into 86 contaminated sediment sites, 15 of which have been cleaned up since 1996.

Many accomplishments during the last decade helped reduce ongoing toxic contamination. The state developed, and is now updating, standards for sediment quality. Areas with potential contamination were surveyed. The state is working to establish multi-user disposal sites in Puget Sound. Many sites are scheduled for cleanup under the Superfund program.

## **Highlights of 2001-2003 Actions**

- State and federal agencies and tribal and local governments and ports will cooperate on the Bellingham Bay Demonstration Pilot Project to clean up contaminated sediments and restore and enhance aquatic habitats.
- State and federal agencies will coordinate policies for cleaning up sediments as part of the Cooperative Sediment Management Program.
- State and federal agencies and ports will cooperate on development of a multi-user site for treating or disposing of contaminated sediments.

## **2001-2003 Budget for State Actions**

Total Provided Funding	\$1,696,560
Total Other Funding	\$602,000

JOINT STATE AND FEDERAL ACTIONS		OUTCOMES		See page 9 for key.					
		Pri-ori-ty	Non-point	Sal-mon	Budget Code	PS Plan Element	Action ID		
The departments of Ecology, Transportation and Natural Resources; Action Team support staff; the Environmental Protection Agency; the U.S. Army Corps of Engineers; and other federal, tribal, state and local governments will continue to carry out the Bellingham Bay Demonstration Pilot Project to clean up contaminated sediments and restore and enhance aquatic habitats.									
DEPARTMENT OF FISH AND WILDLIFE									
	Cleanup and treatment/disposal, as appropriate, of contaminated sediments within Bellingham Bay will commence. Cleanup may be completed in the 2004 to 2006 time period.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DFW-00	S-6	210		
DEPARTMENT OF NATURAL RESOURCES									
	Cleanup and treatment/disposal, as appropriate, of contaminated sediments within Bellingham Bay will commence. Cleanup may be completed in the 2004 to 2006 time period.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DNR-04	S-6	210		
DEPARTMENT OF ECOLOGY									
	Cleanup and treatment/disposal, as appropriate, of contaminated sediments within Bellingham Bay will commence. Cleanup may be completed in the 2004 to 2006 time period.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOE-07	S-6	210		
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION									
	Cleanup and treatment/disposal, as appropriate, of contaminated sediments within Bellingham Bay will commence. Cleanup may be completed in the 2004 to 2006 time period.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOT-02	S-6	210		
PUGET SOUND WATER QUALITY ACTION TEAM									
	Cleanup and treatment/disposal, as appropriate, of contaminated sediments within Bellingham Bay will commence. Cleanup may be completed in the 2004 to 2006 time period.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PSAT-04	S-6	210		

JOINT STATE AND FEDERAL ACTIONS	OUTCOMES	See page 9 for key.					
		Pri- ori- ty	Non- point	Sal- mon	Budget Code	PS Plan Element	Action ID
The state departments of Ecology, Transportation and Natural Resources; Action Team support staff; the Environmental Protection Agency; and the U.S. Army Corps of Engineers will continue to coordinate policies for cleaning up sediments as part of the Cooperative Sediment Management Program.							
DEPARTMENT OF FISH AND WILDLIFE							
	Agencies will be informed of each other's activities and will develop uniform and complementary policies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DFW-00	S-6	211
DEPARTMENT OF NATURAL RESOURCES							
	Agencies will be informed of each other's activities and will develop uniform and complementary policies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DNR-04	S-6	211
DEPARTMENT OF ECOLOGY							
	Agencies will be informed of each other's activities and will develop uniform and complementary policies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOE-07	S-6	211
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION							
	Agencies will be informed of each other's activities and will develop uniform and complementary policies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOT-02	S-6	211
PUGET SOUND WATER QUALITY ACTION TEAM							
	Agencies will be informed of each other's activities and will develop uniform and complementary policies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PSAT-04	S-6	211

JOINT STATE AND FEDERAL ACTIONS	OUTCOMES	See page 9 for key.					
		Pri-ori-ty	Non-point	Sal-mon	Budget Code	PS Plan Element	Action ID

The U.S. Army Corps of Engineers; the U.S. Environmental Protection Agency; and the state departments of Ecology and Natural Resources will continue to manage open-water disposal of dredged material, including making permit decisions, and managing and monitoring disposal sites through the Dredged Material Management Program.

#### DEPARTMENT OF NATURAL RESOURCES

	Open-water disposal sites that meet adopted environmental goals will continue to be available. One program annual review meeting will be completed each year. Dredging and disposal proposals will be reviewed as needed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DNR-03	S-2	212
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#### DEPARTMENT OF ECOLOGY

	Open-water disposal sites that meet adopted environmental goals will continue to be available. One program annual review meeting will be completed each year. Dredging and disposal proposals will be reviewed as needed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOE-07	S-2	212
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In cooperation with the U.S. Army Corps of Engineers, the Environmental Protection Agency, the state departments of Ecology and Natural Resources, the Washington Public Ports Association, the U.S. Fish and Wildlife Service and the Action Team support staff, Ecology will continue the study effort and solicit private proposals for siting, construction and operation of a multi-user disposal or treatment facility in Puget Sound.

#### DEPARTMENT OF NATURAL RESOURCES

	Recommendations for a multi-user site will be completed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DNR-04	S-4	213
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#### DEPARTMENT OF ECOLOGY

	Recommendations for a multi-user site will be completed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOE-07	S-4	213
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#### PUGET SOUND WATER QUALITY ACTION TEAM

	A Puget Sound multi-user disposal or treatment site will be successfully sited and planning will start for construction and operation of the facility.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	PSAT-04	S-4	213
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		See page 9 for key.					
STATE AGENCY ACTIONS	OUTCOMES	Pri-ori-ty	Non-point	Sal-mon	Budget Code	PS Plan Element	Action ID
<b>DEPARTMENT OF ECOLOGY</b>							
In cooperation with the other Multi-User Disposal Site (MUDS) partners, Ecology will solicit private proposals for siting, construction and operation of a multi-user facility in Puget Sound.	A Puget Sound Multi-User Disposal Site will be successfully sited, and planning will begin for construction and operation of the facility.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOE-07	S-4	215
Participate with the Bellingham Bay Pilot partners in implementing planned Bellingham Bay cleanup and restoration plan actions.	Cleanup, treatment and disposal will commence, as appropriate, of contaminated sediments within Bellingham Bay. Cleanup may be completed in the 2004 to 2006 time period.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOE-07	S-6	216
Update and publish a list of contaminated sediment sites annually.	Lists of contaminated sediment sites will be available for use by organizations and the public.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOE-07	S-6	217
Continue to clean up priority contaminated sediment sites.	Annually, the list of contaminated sediment sites will be ranked for cleanup activities. A list identifying the status of clean-up activities for contaminated sediment sites will be updated. Contaminated sediment sites will be cleaned up.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOE-07	S-6	218
Develop technical and policy guidance for coordination of the Sediment Management Standards (Chapter 173-204 WAC) with listing and delisting and completion of sediment Total Maximum Daily Loads (TMDL).	A sediment TMDL guidance document and a proposed sediment TMDL list will be developed for the year 2001.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOE-07	S-6	219
Continue to coordinate with the U.S. Army Corps of Engineers, Department of Natural Resources and the Environmental Protection Agency, Region 10, on implementing the Dredged Material Management Program managing open-water disposal of dredged material in Washington State.	A program annual review meeting will be conducted each year. Dredging and disposal proposals will be reviewed as needed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOE-07	S-2	220
<b>WASHINGTON STATE DEPARTMENT OF TRANSPORTATION</b>							
Develop and implement programs to reduce and control the impacts of toxic compounds on sensitive habitats associated with transportation projects.	Strategies will continue to be developed and implemented to control sources, clean up contamination, and repair damages to natural resources resulting from the release of toxic compounds into the environment. Statewide strategies will be integrated with highway and ferry transportation projects. Funding mechanisms will be developed for the cleanup of contaminated sediments, particularly those surrounding ferry terminals. Statewide strategies will be developed to integrate the cleanup of toxics with watershed planning. Federal "brownfields" policies on toxics will be incorporated into state transportation plans.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOT-02	S-1	221

		See page 9 for key.					
STATE AGENCY ACTIONS	OUTCOMES	Pri-ori-ty	Non-point	Sal-mon	Budget Code	PS Plan Element	Action ID

#### WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

Continue to support restoration activities in Eagle Harbor, including monitoring of eelgrass plantings and estuary restoration related to the Eagle Harbor Superfund Site. Develop contingency plans for spills at Washington State Ferry sites and during highway projects. Sample sediment at ferry terminals.	Permit compliance and successful restoration will be carried out at the Eagle Harbor Superfund site. Spill management plans will be developed to improve prevention and response to accidental spills. Sediment sampling will be completed at selected ferry terminals.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	DOT-02	S-0	222
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